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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,306	09/19/2001	Futoshi Kuniyoshi	743421-0043	1720

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EXAMINER
SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 07/28/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/955,306	KUNIYOSHI ET AL.	
	Examiner	Art Unit	
	John P. Sheehan	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9 and 11 to 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9 and 11 to 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,7&10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 9 and 11 to 15, in Paper No. 12 is acknowledged.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Mikio et al. (Mikio, cited by applicants in the IDS submitted March 15, 2002).

Mikio teaches a specific example of a R-Fe-B rare earth magnet having an average crystal grain size of 4 μm, an oxygen concentration of 2020 ppm and a nitrogen content of 500 ppm (Mikio, see English language translation attached to this Office action, paragraph 0016). The average crystal grain size, the oxygen concentration and

the nitrogen content of this example R-Fe-B rare earth magnet are all encompasses by applicants' claim 9. Accordingly, claim 9 does not distinguish over Mikio's example alloy.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 11, 12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Mikio, cited by applicants in the IDS submitted March 15, 2002).

7. Mikio teaches a specific example of a R-Fe-B rare earth magnet having an average crystal grain size of 4 μm which is encompassed by applicants' claim 12, an oxygen concentration of 2020 ppm and a nitrogen content of 500 ppm which are encompassed by applicants' claims 11, 12, 14 and 15 (Mikio, see English language translation attached to this Office action, paragraph 0016). Mikio's specific example alloy contains 5 ppm hydrogen (see Mikio's paragraph 0016). The proportions of the alloy composition of the example alloy taught in Mikio's paragraph 0016 is set forth in atomic percents, however simply converting the atomic percents to weight percent reveals that the alloy contains 29.6 weight percent rare earth element which is encompassed by applicants claims 14 and 15.

The claims and Mikio's specific example alloy differ in that Mikio's example alloy contains 5 ppm hydrogen whereas the instant claims require a minimum of 10 ppm hydrogen.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Mikio's example alloy differs from applicants claims alloy only in the amount of hydrogen, Mikio's example alloy contains 5 ppm hydrogen and the instant claims require a minimum of 10 ppm hydrogen, and thus so closely approximates the instantly claimed alloy that one of ordinary skill in the art would have expected Mikio's example alloy and the claimed alloys to have the same properties, Titanium Metals v. Banner, 227 USPQ 773 and MPEP 2144.05.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over (Mikio, cited by applicants in the IDS submitted March 15, 2002).

Mikio teaches and is applied as set forth in the immediately proceeding prior art rejection.

Claim 13 and Mikio's specific example alloy differ in that Mikio's example alloy contains 5 ppm hydrogen whereas the instant claims require a minimum of 10 ppm hydrogen. Further, Mikio does not teach the process step recited in product by process claim 13.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Mikio's example alloy differs from applicants claims alloy only in the amount of hydrogen, Mikio's example

alloy containing 5 ppm hydrogen and the instant claims requiring a minimum of 10 ppm hydrogen, and thus so closely approximates the instantly claimed alloy that one of ordinary skill in the art would have expected Mikio's example alloy and the claimed alloys to have the same properties, Titanium Metals v. Banner, 227 USPQ 773 and MPEP 2144.05. Further, the process step recited in instant product by process claim 13 does not necessarily lend patentability to the claimed product, MPEP 2113.

9. Claims 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Document No. 93/20567..

PCT '567 teaches a R-Fe-B rare earth magnet containing, in weight percent, 0.01 to 2.0 % (100 to 20,000 ppm) oxygen, 0.003 to 5 % (30 to 50,000 ppm) nitrogen, 0.001 to 1.0 % (10 to 10,000 ppm) hydrogen and 8 t0 42 % rare earth metal (see English language abstract). This R-Fe-B rare earth magnet composition overlaps the composition recited in applicants' claims.

The claims and PCT '567differ in that PCT '567 does not teach the exact same proportions as recited in applicants' claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloys taught by PCT '567 overlap applicants' claimed alloy and therefore are considered to establish a prima facie case of obviousness, In re Peterson 65 USPQ2d 1379 (CAFC 2003, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Document No. 93/20567.

PCT '567 teaches a R-Fe-B rare earth magnet containing, in weight percent, 0.01 to 2.0 % (100 to 20,000 ppm) oxygen, 0.003 to 5 % (30 to 50,000 ppm) nitrogen, 0.001 to 1.0 % (10 to 10,000 ppm) hydrogen and 8 t0 42 % rare earth metal (see English language abstract). This R-Fe-B rare earth magnet composition overlaps the composition recited in applicants' claims.

Claim 13 and PCT '567 differ in that PCT '567 does not teach the process step recited in product by process claim 13.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process step recited in instant product by process claim 13 does not necessarily lend patentability to the claimed product, MPEP 2113.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

John P. Sheehan
Primary Examiner
Art Unit 1742

jps
July 23, 2003